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Mental health literacy and attitudes in a Swedish community sample – Investigating the role of personal experience of mental health care

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Abstract

Background: Mental ill health is a common condition in the general population, yet only about half of those with a mental disorder have treatment contact. Personal experience may affect attitudes, which in turn influence the help-seeking process. This study investigated differences in mental health literacy and attitudes among mentally healthy persons and in persons with symptoms of mental illness with and without treatment contact.

Method: A postal screening questionnaire was sent to a random sample of the general population aged 20–64 in the county of Skaraborg, Sweden in order to ascertain mental health status and history of treatment contact; 3538 responded (49%). Face-to-face interviews were carried out in random sub samples of mentally healthy persons ($n = 128$) and in mentally ill persons with ($n = 125$) and without ($n = 105$) mental health care contact. Mental health literacy and attitudes to treatment were assessed using questions based on a vignette depicting a person with depression. Past month mental disorder was diagnosed according to the Schedule for Clinical Assessment in Neuropsychiatry (SCAN).

Results: Two thirds failed to recognize depression in a vignette; recognition was equally poor in mentally healthy persons and in persons with symptoms of mental illness with and without treatment contact. In response to an open-ended question concerning appropriate interventions, one third suggested counselling and only one percent proposed antidepressant treatment. Again, proportions were similar in all groups. Persons with a history of mental health contact more often suggested that a GP would provide the best form of help. When presented with a list of possible interventions, those with a history of mental health contact were more positive to medical interventions such as antidepressants, hypnotics, and inpatient psychiatric treatment. When asked about the prognosis for the condition described in the vignette, persons with treatment contact were less likely to believe in full recovery without intervention; mentally ill without treatment contact were more optimistic.

Conclusion: Mental health literacy, specially concerning attitudes towards interventions is associated with personal history of mental health care.

Background

Mental disorders are common in the general population, with a lifetime prevalence of about 40–50% [1-3]. The high prevalence for a common mental disorder such as depression is an obvious public health problem involving both the suffering of individuals and their families and significant costs for society [4-6]. Unmet need for mental health care is a widespread problem [7]. Only half of those with a diagnosis of mental or addictive disorders receive any treatment from the mental health system [8-10].

Help-seeking behaviour is complex. Rates of treatment contact differ among mental disorders. Among high-prevalence disorders, panic disorder and mood disorders have the highest rates of treatment contact, while alcohol related disorders have the lowest rates [8,11,12]. Women, middle-aged people, whites and those with a higher level of education have higher rates of treatment contact [8,13-15].

An important part of help seeking is recognition; does the subject recognize his/her problem as a mental disorder? A review on the issue shows that a substantial proportion of the lay public cannot correctly recognize mental disorders [16]. Lay people often attribute mental illness to psychosocial stress rather than a medical disorder [17-20], which probably affects the demand for treatment. Beliefs about the helpfulness of interventions for mental disorders differ in professionals and lay persons [21]. National awareness campaigns aimed at improving public understanding of depression and its treatment have been implemented in countries such as the United Kingdom and Australia [22,23]. Evaluations of the campaigns have shown positive changes in attitudes towards depression and its treatment [22,23], most notably concerning counselling and medication but also about the value of help-seeking in general [22]. It also appears to have improved the recognition of depression and the impact of this illness [24]. Recent research from Australia, however, reveals that there has yet not been any significant improvement in the prevalence of depression [25]. While no such population education strategy has been implemented in Sweden, there has been a marked increase in antidepressant prescription rates over the past fifteen years. Antidepressants are currently prescribed to an estimated 5% of the population [26]. This suggests that depression and anxiety disorders, for which these drugs are indicated, are now more often recognized and treated by Swedish physicians. In light of this, it would be of interest to study mental health literacy and attitudes towards treatment in a Swedish population.

The aim of the present study was to examine if there was a relationship between a personal history of mental health care and mental health literacy. Age and gender differ-

ences were also examined. The ability to recognize a common mental disorder (e.g. depression) and attitudes towards interventions and prognosis were studied.

Method

Material

Stage I

A population-based survey was performed during March 2000–March 2003. In the first stage a postal screening questionnaire was distributed and responding to the questionnaire was considered as informed consent. The primary survey population consisted of all Swedish residents aged 20–64 in the former County of Skaraborg. For the purpose of the study a sample of 7 500 subjects was randomly selected from the general population register; 254 could not be reached. The response rate for the postal questionnaire was 49% (3 538/7 246). In the primary survey population 125 893 people were between 20–64 years old, 29.0% aged 20–34, 35.6% aged 35–49 and 35.2% aged 50–64. Forty-nine per cent were women. Among the responders fifty-five per cent were women, 26.6% aged 20–34, 34.5% aged 35–49 and 38.9% aged 50–64.

Screening questionnaire

The purpose of the screening was to ascertain mental health status and history of treatment contact for mental health problems. The questionnaire included demographic data, a self-report instrument rating symptoms of mental disorder, and questions about health care contact. The self-report instrument has previously been used in a population study of mental disorders in Stockholm, Sweden [27,28].

A respondent was defined as screening positive for symptoms of mental ill health if at least one of the following screening criteria were met:

* \geq Six symptoms of anxiety and/or panic attacks with anticipatory fear of future attacks. The questions were based on Sheehan Patient-Rated (Panic) Scale [29].

* \geq One symptom of avoidance of agoraphobic or social phobic situations due to fear or anxiety. The symptoms were assessed using questions from Mark and Mathews brief standard rating for phobic patients [30]. Three questions on agoraphobia including avoidance of transport vehicles, shops or cinemas, and open places. Avoidance of social situations due to fear or anxiety was investigated concerning the following circumstances: avoiding eating, drinking or writing in public, avoiding being in the centre of attention, avoiding being with other people due to a high level of self-criticism. One question concerning avoidance of other situations was included.

* \geq One obsessive compulsive symptom during last 30 days and suffering due to this [31]. Three screening questions recommended by the Swedish Psychiatric Association and the Swedish Institute for Health Service Development were included. These concerned obsessional washing, checking, and intrusive unpleasant thoughts. A question measuring severity of social impairment was added, in accordance with DSM-IV criteria.

* \geq Five symptoms of depression lasting more than two weeks causing disability according a slightly modified Major Depression Inventory (MDI) (4 point-scale [32] instead of the usual 6 point-scale) [33,34]. A question about significant distress during the last 14 days, caused by the symptoms, was included.

* Presence of suicidal thoughts some of the time or more often during the last two weeks, according to the MDI.

* Alcohol Use Disorder Identification Test score (AUDIT) ≥ 11 [35].

* Any use of illicit drugs during last year.

* \geq One symptom of social disability due to psychological problems measured according to WHO's brief Disability Assessment Schedule (WHO-DAS-S) [36,37].

* Self-report of an ongoing life-crisis, depression, "burn-out", or other mental disorder (according to a checklist).

* Current psychoactive drug prescription. (All respondents who had indicated present use of medication were asked to list their medications including doses. These lists were manually checked for psychoactive drugs).

The respondents were asked whether they had contacted health care for sleep disturbance, personal problem or mental health problems. In case of a positive answer, the respondents were asked to indicate present (last three months) and/or former contact from a checklist. The sources of care that could be indicated included specialised mental health care (psychiatric outpatient clinic of a psychiatric hospital; independent psychiatrist, psychologist or psychotherapist) and primary care (general practitioner, company physician, and non-psychiatric independent physicians). All respondents with health care contact during the past three months, as well as all those with a history of contact with specialised mental health care, were coded as having contact for a mental health problem. Subjects who were currently prescribed psychoactive drug were also considered to have contact with health care for mental health problems.

645 persons (18.2%) had mental ill health as defined above. Ten percent of the total sample ($N = 353$) had health care contact for mental health problems (group I: cases with contact). An additional 292 persons (8.3%) fulfilled above criteria but had no relevant health care contact (group II: cases without contact). Among the cases with contact, 37% reported depressive symptoms, 18% had symptoms of any anxiety syndrome (but no depressive symptoms) and 7% had harmful alcohol use (but no depressive symptoms, no anxiety symptoms). The remaining had either indicated disability due to psychological problems, ongoing mental disorder or current psychoactive drug prescription. The corresponding numbers for cases without contact is 36% with depressive symptoms, 20% with anxiety symptoms and 24% with harmful alcohol use. Respondents who did not meet the above stated criteria for "caseness" ($n = 2\,893$) were classified as mentally healthy (group III: mentally healthy).

Stage II

A random sample from each of the three groups was invited to participate in a face-to-face interview. Among cases 'with contact' we approached 141 people; 125 (89%) agreed to participate in an interview. The corresponding figures for 'cases without contact' were 105/160 (66%). Of the mentally healthy, 252 persons were randomly chosen for an interview; 128 interviews were conducted (51%). Fifty per cent of the interviews took place in the homes of the respondents and the remainder were conducted at the research office.

Interview

The mean time between the screening questionnaire and the interview was 4 months (range 1–7 months). The interview began with a vignette developed by Jorm and colleagues [38] designed to determine mental health literacy. The vignette depicted a diagnostically unlabelled case with major depressive disorder. Either a female (Anna) or a male (Magnus) version was presented, depending on the sex of the respondent.

"Anna is 30 years old. She has been feeling unusually sad and miserable for the last few weeks. Even though she is tired all the time, she has trouble sleeping almost every night. Anna doesn't feel like eating and has lost weight. She can't keep her mind on her work and puts off making decisions. Even day-to-day tasks seem too much for her. This has come to the attention of Anna's boss who is concerned about her lowered productivity."

After being presented with the vignette, respondents were questioned about what was wrong and how the person could be helped. Recognition was examined using an open-ended question: "What, if anything, do you think is wrong with Anna?" If multiple responses were given, only the label closest to the correct diagnosis (depression) was

registered. Optimal form of help was assessed by asking the respondents how Anna/Magnus best could be helped.

After responding to these open-ended questions, participants were shown a list of different interventions (professionals and other potential helpers, medications and a variety of other treatments) and asked to rate each intervention as helpful, harmful or neither. Respondents were then asked about the prognosis (full recovery, full recovery with risk of relapse, partial recovery, partial recovery with risk of relapse, no improvement, or progression) were the person to receive the preferred intervention. Finally, they were asked to assess prognosis in a similar manner, were the person described in the vignette to receive no treatment at all.

Following the administration of the vignette based questions, the interviewer used the Schedule of Clinical Assessment in Neuropsychiatry (SCAN) version 2.1 PART 1, chapter 1–8 and 11 [39,40] to generate past month diagnoses in accordance with DSM-IV [41].

The instrument including the vignette and the questions were translated to Swedish by the investigators and checked and edited by colleagues. The Ethical Committee of Karolinska Institute approved the study.

Statistical analysis

Cross tabulation with Chi² test was used to evaluate differences among sex, age groups, and interview groups. Multiple logistic regression analyses were carried out with correct recognition as dependent variable and sex, age group, level of education and interview group (mentally healthy/cases with contact/cases without contact) as covariates. Age was trichotomized (20–34, 35–49 and 50–64 years) with the middle group as the reference. Three educational levels were identified (0–9, 10–12 and > 12 years), with the middle group as the reference group. Statistical data management, descriptive analyses and analyses of the data were carried out using Statistical Package for Social Sciences (SPSS 12.0 for Windows) [42].

Results

The age and gender distributions in the three interview groups are shown in Table 1. The proportion of young people was notably larger among cases without contact with mental health care. The difference in age and gender distribution among the groups was taken into consideration in further analyses.

Recognition of depression

Less than one third of the respondents recognized depression (Figure 1). Twenty per cent indicated that the problem described in the vignette was due to stress and another 20% considered it a day-to-day problem. The responses to the open-ended question "What is wrong" did not differ significantly between the three interview groups. Twenty-three respondents fulfilled criteria for present major depressive episode in accordance with SCAN and 39% of these recognized that the vignette depicted depression (n.s. compared to the rest of the respondents).

More women than men correctly recognized depression, 36% versus 21% ($p = 0.002$). A larger proportion of the youngest age group (20–34) recognized depression, 42% compared to 24% ($p = 0.001$) in the two older age groups. Among the respondents, 59 were women aged 20–34, of these 52% recognized depression, which was better than in females in the older age groups, 31% ($p = 0.003$), and also better than in males in the young age group, 28% ($p = 0.013$). The multiple regression model was in line with the above results. Female sex (OR 2.07, $p = 0.006$), younger age (OR 1.99, $p = 0.028$), and higher education (OR 1.85, $p = 0.025$) predicted recognition. History of mental health care did not predict recognition in the regression model.

Best form of help

About one third of the participants in each interview group responded that the best form of help would be to seek counselling (Table 2) and counselling was the most common response to that open-ended question. While one fifth of those with mental health contact suggested

Table 1: Participants in the face-to-face interview. Demographic characteristics in cases with and without mental health care contact and in mentally healthy.

	A Cases with contact N = 125	B Cases without contact N = 105	C Mentally healthy N = 128	Total N = 358	p-value
Male	48 (38%)	48 (46%)	52 (41%)	148 (41%)	n.s.
Female	77 (62%)	57 (54%)	76 (59%)	210 (59%)	n.s.
20–34 years	24 (19%)	46 (44%)	29 (23%)	99 (28%)	B>A, $p < 0.001$ B>C, $p = 0.001$
35–49 years	42 (34%)	30 (28%)	42 (33%)	114 (32%)	n.s.
50–64 years	59 (47%)	29 (28%)	57 (44%)	145 (40%)	A>B, $P = 0.02$ C>B, $p = 0.008$

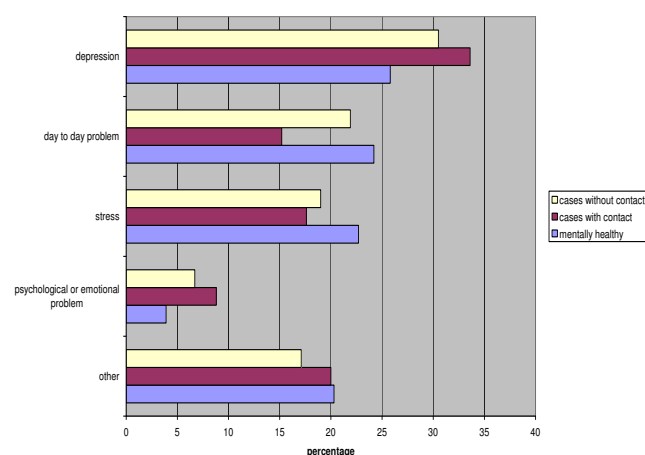


Figure 1
Perceived problem in response to vignette depicting depression. Open ended responses shown for subgroups with and without contact for mental health problems, and for mentally healthy.

that the person in the vignette would be best helped by a GP, proportions suggesting a GP were significantly lower in the other two interview groups. Persons with mental health contact were less likely to respond that family or close friend would constitute the best form of help. Very few of the respondents considered a psychiatrist the best source of help; there was no difference among interview groups. Medication was seldom considered the best form of help. Work-related interventions were preferred by 15% of the total group. Again, there were no differences among groups.

When results for the total group were examined separately by sex, women were more likely than men, 16% versus

5% ($p = 0.003$) to suggest contact with a GP as the best form of help.

Helpfulness of listed interventions

The top five interventions rated as helpful were relaxation techniques, talking to family or close friends, physical activity, psychotherapy, and consulting a psychologist. The ratings for each intervention are presented by subgroup in Table 3. Cases without mental health contact more often rated family or close friends as helpful compared to cases with such contact. Three quarters of those with mental health contact rated antidepressants as helpful, a proportion larger than that in the other two interview groups (50% in each group). Sixty-three persons were on antidepressants at the time of the interview and 90% of these rated antidepressants as helpful compared to 51% among all others ($p = 0.000$). One fifth of the respondents thought that antidepressants could be harmful, 31% among cases without contact and 26% among mentally healthy, compared to only 8% among cases with mental health care contact ($p = 0.000$). No significant differences could be shown for sex or age on this topic. Thirty-nine respondents had some form of ongoing psychosocial intervention and/or formal psychotherapy at the time of the interview (data retrieved from the SCAN interview), and of these 92% rated psychotherapy as helpful for the person in the vignette, compared to 74% ($p = 0.000$) among the rest of the respondents.

Table 3 shows further that one fifth of the cases with mental health contact rated admission to a psychiatric ward as helpful; this proportion was significantly larger than that for cases without contact. Almost sixty percent (57.8%) rated admission to a psychiatric ward as harmful; there were no significant differences among groups. The youngest age group was most negative, 71% compared to 53% for the rest of the respondents ($p = 0.001$).

Table 2: Best form of help – responses to open-ended question

	A Cases with contact N = 125	B Cases without contact N = 105	C Mentally healthy N = 128	p-value
	(%)	(%)	(%)	
Counselling	34.4	34.3	35.9	n.s.
Help from family or close friend	11.2	24.8	24.2	B>A, $p = 0.007$ C>A, $p = 0.007$
See a doctor (GP)	20.8	9.5	6.3	A>B, $p = 0.019$ A>C, $p = 0.001$
Work related intervention	15.2	13.3	17.2	n.s.
Anna/Magnus must first recognise the problem	7.2	5.7	3.9	n.s.
See a psychiatrist	2.4	1.9	0.8	n.s.
Take medication	4.0	1.0	0	n.s.
Something else	3.2	6.7	8.6	n.s.
Don't know	3.2	1.0	3.1	n.s.

Table 3: Percentage of respondents who rated listed interventions as helpful.

Type of intervention	A Cases with contact N = 125	B Cases without contact N = 105	C Mentally healthy N = 128	p-value
People who could help	(%)	(%)	(%)	
GP/family doctor	60.0	49.5	52.3	n.s.
Psychiatrist	68.8	61.0	63.3	n.s.
Psychologist	77.6	73.3	75.0	n.s.
Close family/friends	76.8	90.5	84.4	B>A p = 0.006
Naturopath/herbalist	33.9	33.3	41.4	n.s.
Clergy	32.0	42.9	41.4	n.s.
Anna/Magnus tries to deal with problems on her/his own	63.2	66.7	64.8	n.s.
Medications				
Vitamins and minerals	52.8	54.3	53.9	n.s.
Pain relievers	5.6	4.8	3.9	n.s.
Antibiotics	0.8	2.9	3.9	n.s.
Antidepressants	74.4%	47.6	50.8	A>B, p < 0.001 A>C, p < 0.001
Sleeping pills	56.8	38.1	39.8	A>B, p = 0.005 A>C; p = 0.007
Tranquilisers	31.5	24.8	24.2	n.s.
Activities/therapies				
Becoming more physically active	77.6	84.8	81.3	n.s.
Self-help books	72.0	58.1	58.6	n.s.
Getting out and about more	58.4	68.6	64.1	n.s.
Relaxation, stress management, meditation, yoga	89.6	88.6	94.5	n.s.
Cutting out alcohol all together	66.1	61.9	65.6	n.s.
Psychotherapy	80.8	73.3	72.7	n.s.
Hypnosis	19.2	16.2	9.4	n.s.
Admission to a psychiatric ward of a hospital	20.0	6.7	14.1	A>B, p = 0.004
Electroconvulsive therapy (ECT)	7.2	1.9	3.9	n.s.
Having an occasional drink to relax	4.8	2.9	5.5	n.s.
A special diet or avoiding certain food	24.0	27.6	19.7	n.s.

Electroconvulsive Therapy (ECT) was rated as harmful by 71%, cases without contact rated ECT as harmful in 80% compared to 62% among cases with contact ($p = 0.006$). The youngest age group (20–34) was most negative towards ECT, 82% compared to 66% for the rest of the respondents ($p = 0.002$). An occasional drink was the intervention most commonly rated as harmful. At the time of the interview 20 persons fulfilled SCAN criteria for alcohol abuse or alcohol dependence, of these 65% rated an occasional drink as harmful compared to 87% among the rest of the respondents ($p = 0.004$).

Ratings of prognosis

The participants were asked to give their opinion about the prognosis with and without the intervention they had indicated as most appropriate in response to the open-ended question. Eighty-four per cent believed that there would be full recovery or full recovery with risk of relapse

with appropriate help (Table 4). No significant differences could be detected among interview groups. In the alternative without intervention, 16% believed in full recovery or full recovery with risk of relapse. These replies were much more common among cases without contact compared to cases with contact (23% versus 8%, $p = 0.002$). One third (31%) believed that there would be progression of symptoms without appropriate support; there were no differences among groups.

Discussion

Only about a third of those with a personal history of treatment for mental illness recognized depression, a proportion similar to that observed among persons with no such history. However, attitudes concerning psychological and medical interventions for a person with depressive symptoms were more positive among those with a personal history. Due to the cross-sectional design of our

Table 4: Anticipated prognosis with and without treatment

	Prognosis with preferred intervention				Prognosis without any form of intervention			
	A Cases with contact N = 125	B Cases without contact N = 105	C Mentally healthy N = 128	p-value	A Cases with contact N = 125	B Cases without contact N = 105	C Mentally healthy N = 128	p-value
	(%)	(%)	(%)		%	%	%	
Full recovery	26.9	27.6	32.0	n.s.	0.8	3.8	3.9	n.s.
Full recovery with risk of relapse	56.8	55.2	52.3	n.s.	7.2	19.0	14.1	B>A, p = 0.007
Partial recovery	4.0	8.6	3.9	n.s.	4.0	3.8	10.9	n.s.
Partial recovery with risk of relapse	12.8	8.6	10.9	n.s.	33.6	30.5	32.0	n.s.
No improvement	0	0	0	n.s.	15.2	10.5	10.2	n.s.
Progression	0	0	0	n.s.	36.8	31.4	25.8	n.s.

study, we cannot assume that these more positive attitudes are a direct result of the treatment experience. It is probable that persons with positive attitudes towards mental health care would be more likely to seek help in the first place. Before results are discussed further, some comments concerning methodology are warranted.

Strengths and limitations

Strengths of the study include a study design with a well-defined population. It is advantageous to carry out such a study in a country like Sweden where every resident has a unique personal identification number. This facilitates sampling and respondents may be more representative of the underlying population than those who are selected by random telephoning and household sampling. While there was considerable non-participation at the questionnaire stage, our response rate is higher than in some other studies in the field [22,24]. Still, it is probable that persons with psychiatric symptoms and negative attitudes to help-seeking are overrepresented among those who did not respond to the postal questionnaire.

The method of postal questionnaire was chosen with the specific purpose of reaching also a non-clinical group, namely persons with symptoms of mental disorder but no treatment contact. Most of the subjects classified as cases had an active clinical picture. As expected there were somewhat fewer subjects with active symptoms among the cases with contact, probably due to successful treatment. It is notable that even though cases without contact had not sought help for their symptoms, as many as two out of three of these opted to participate in an interview about their mental health and personal problems, when an opportunity was offered.

Due to the skewness in participation rate at the second stage, significant differences among the groups may have been missed. As expected, cases with mental health care contact had the highest participation rate. It was also fairly easy to recruit cases without mental health care contact. However, it was more difficult to motivate mentally healthy to participate in the interview. One might assume that those who are sceptical to mental health care and what it offers are less inclined to participate in an investigation like this. Another limitation is that the study did not have the power to detect group differences in attitudes to interventions that were chosen by a small number of persons. For example, while the proportion of cases with contact who were positive about ECT was thrice that of the group without contact, the difference in proportions was not significant.

The study did not focus on particular diagnostic entity, but rather on mental illness within a much broader context. This is a weakness, when it comes to comparability with other research, but could also be seen as strength as those sampled with this approach mirror the mental health status in the community.

Recognition

Less than one third correctly recognized that the vignette depicted a depression. This study was set in a country without a national depression awareness campaign, and it is thus not surprising that many respondents (60%) described the problem within the broader context of mental illness (including depression, mental illness, stress and emotional problems) rather than specifically identifying depression. Our findings can be compared to results from a country such as Australia, where public recognition of depression increased from 39% in 1997 to 67% in 2003–2004 [43]. Efforts have been made on many levels

in the Australian society to enhance public knowledge about the ubiquity of mental disorders, particularly depression, but it is still difficult to attribute the improvement of mental health literacy about depression to any one factor [44].

Recognition of a depression from a vignette did not differ among our three interview groups. Neither was recognition influenced by the fact that the individual actually had a current episode of major depression. It has previously been shown by Goldney and co-workers [45], that those with a major depression were no more likely than others to recognize a depression. One explanation for this might be cognitive impairment due to depression.

Female sex, young age and a higher degree of education were associated with recognition. Greater mental health literacy has been shown in younger persons than in older persons in Australia [46]. In our study, young women were the group with the best mental health literacy; more than fifty per cent recognized depression. Consequently, males and less educated groups have difficulties in recognizing depression which may prevent them from seeking help from the mental health care system. This may result in unmet needs, which has recently been pointed out as a motive for strategies that target these groups [47].

Interventions

In response to the open-ended question regarding the best form of treatment, one third of the participants suggested counselling and there was no difference among groups. A large majority of the respondents favoured psychotherapy. This is in line with other reports based on case vignettes [16]. A review of preferences among depressed patients in primary care reveals that a majority prefer counselling or psychotherapy [48].

Significantly more respondents among cases with contact were in favour of consulting a GP, compared to both cases without contact and mentally healthy. Only 13% of the total group recommended contact with a GP, a proportion considerably smaller than reported from Australia, where half of the respondents indicated that the person in the vignette should contact their GP [44]. While this may be due to different attitudes towards GPs, it may also reflect differences in how primary care is structured in Australia and Sweden. It is not always easy to get an appointment with a GP in Sweden, and there is often a lack of physician continuity which might make persons less willing to seek help for mental health problems. The proportion of respondents in the current study who indicated that work-related interventions would provide the best help was similar to the proportion that suggested contact with a GP. During the interview many respondents made note of the boss' concern regarding lower productivity. Stressful work

environments resulting in sick leave due to "burn-out" have been a recent focus in the Swedish mass media, and this might in part explain the finding that as many as 15 percent considered that the best form of help would be a work related intervention.

Cases with contact were less positive towards the lay support system; this was the case both in the open-ended and in the forced responses. It is possible that cases with history of mental health contact had previously elicited help from family and friends and had found that insufficient. This could have played a role in their decision to seek treatment. Cases without contact preferred the lay support system. Previous research from Germany shows that the public opinion favours the lay support system for depression [49]. In Australia, however, only one fifth suggested lay support [43,45]. As mentioned above, the most common suggestion was the GP, which might reflect the strong role of the family doctor.

Concerning pharmacological interventions, such as antidepressants, cases with contact were more positive than both cases without contact and mentally healthy. This was even more pronounced in the subgroup that was presently using antidepressants; nine out of ten rated this medication as helpful. In light of previous research, it was somewhat unexpected that half of those without contact rated antidepressants as helpful. Other research shows that most lay people have negative views of antidepressants [16,50] and less than one third of general population or depressed primary care samples are positive about treatment with antidepressants [48]. In the present study 20% rated antidepressants as harmful, a figure similar to that reported from Australia [44]. Reasons for public scepticism include worry about side effects and the belief that antidepressants may cause dependency [48]. Also, it has been shown that psychotropic drugs provoke fear of losing control to a larger extent than drugs indicated for physical illness [51]. A question may be to what extent the individual's experience may affect treatment preferences? Jorm and co-workers showed that people who had sought help for depression were more likely to believe in medical interventions [52].

Outcome with and without professional help

As in other research [16] our participants perceive the course of depression more optimistically with appropriate treatment than in the absence of treatment. Studies from Europe, Asia and Australia report that only about 5% of the population believe in full recovery for depression without help [53,54]. In our study one fourth of the cases without contact believed in full recovery without intervention. Is this optimism based on own experience of recovery without treatment or is it due to an underestimation of the problem?

Conclusion

While a personal history of mental health care was not associated with better recognition of depression, attitudes toward psychological and medical interventions were clearly more positive in this group. It is also worthwhile to note that counselling was the favoured intervention in all groups. Resources for psychotherapeutic treatments have been rather scarce in many parts of Sweden, but in recent years short term psychotherapy has become increasingly available in primary care settings. One focus of future research could be to investigate attitudes before and after more individualized treatment.

Competing interests

The author(s) declare that they have no competing interests.

Authors' contributions

KD contributed to the conception and design of the study, acquisition of data, analysis and interpretation of results, and drafting/completion of the paper. MW contributed to the interpretation of results, and drafting/completion of the paper. BR contributed to the conception and design of the study, interpretation of results, and drafting/completion of the paper. All authors have read and approved the final manuscript.

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